**Amendments to the Claims**:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) A liquid crystal alignment agent used in a method for alignment of liquid crystal molecules that form a liquid crystal alignment film comprising irradiating a thin alignment film formed on a substrate with <u>polarized</u> light or electron rays and aligning the liquid crystal molecules on the substrate without any rubbing treatment, said liquid crystal alignment agent comprising a polymer compound comprising a structure selected from the group consisting of the general formula (1) – (7) below
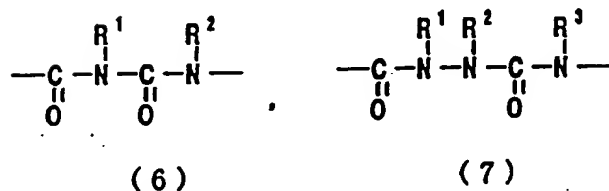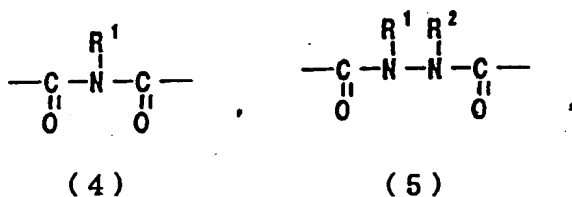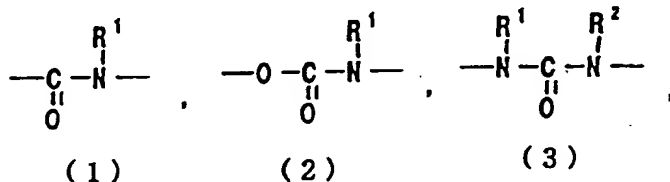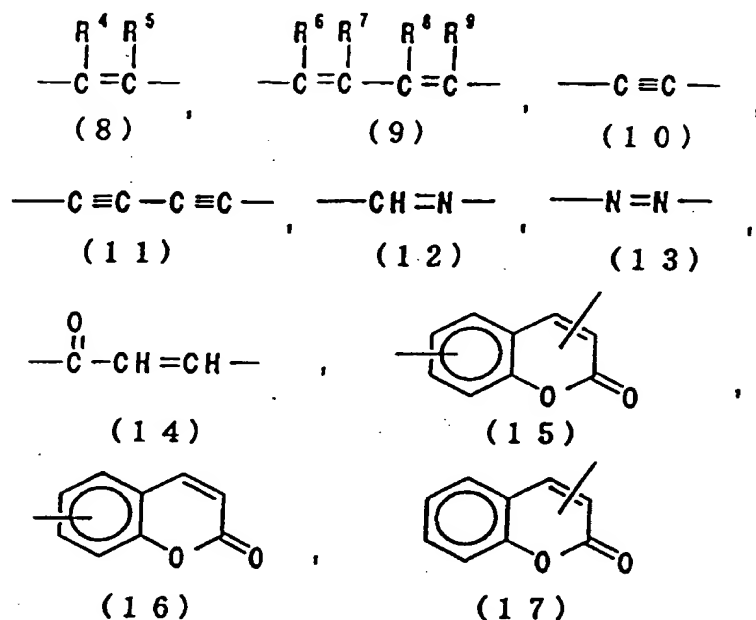

wherein,

R^1, R^2 and R^3 are independently of each other hydrogen, alkyl, substituted alkyl, aryl or propargyl;

the polymer compound main chain has a number-average molecular weight of 1,000 – 300,000; and

said structure makes a direct bond with either a divalent or trivalent aromatic group at both ends or with a divalent or trivalent aromatic group at one end and a divalent or trivalent alicyclic hydrocarbon group at the other end.
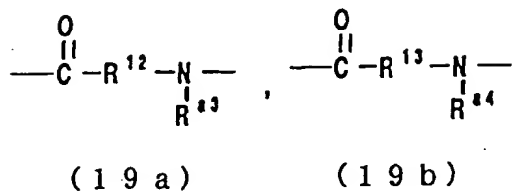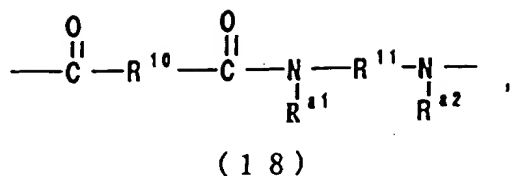
2.   (Previously Presented) The liquid crystal alignment agent according to Claim 1, wherein the main chain or a side chain of the polymer have no functional groups shown in the general formula (8) – (17) below

$$
\begin{array}{ccc}
\underset{(8)}{\overset{R^4\ R^5}{-C=C-}} & \underset{(9)}{\overset{R^6 R^7\ R^8 R^9}{-C=C-C=C-}} & \underset{(10)}{-C\equiv C-}
\end{array}
$$

$$
\begin{array}{ccc}
\underset{(11)}{-C\equiv C-C\equiv C-} & \underset{(12)}{-CH=N-} & \underset{(13)}{-N=N-}
\end{array}
$$

$$
\underset{(14)}{\overset{O}{\overset{\|}{-C}}-CH=CH-}
$$

(15)

(16)

(17)

wherein R^4, R^5, R^6, R^7, R^8 and R^9 are independently of each other hydrogen, halogen, alkyl, substituted alkyl, substituted alkoxy, carboxyl, alkoxycarbonyl or a cyano group as a substituent group that may lead to a dimerization reaction or an isomerization reaction by the irradiation with light or electron rays.

3.   (Previously Presented) The liquid crystal alignment agent according to Claim 1, wherein said polymer is polyamide.

4.   (Previously Presented) The liquid crystal alignment agent according to Claim 3, wherein said polymer compound is polyamide having a repeating unit comprising of a general formula (18) or of a general formula (19a) and (19b) below

$$-\overset{\overset{\displaystyle O}{\|}}{C}-R^{10}-\overset{\overset{\displaystyle O}{\|}}{C}-\underset{\underset{\displaystyle R^{11}}{|}}{N}-R^{11}-\underset{\underset{\displaystyle R^{12}}{|}}{N}-$$

(18)

$$-\overset{\overset{\displaystyle O}{\|}}{C}-R^{12}-\underset{\underset{\displaystyle R^{13}}{|}}{N}- \qquad -\overset{\overset{\displaystyle O}{\|}}{C}-R^{13}-\underset{\underset{\displaystyle R^{14}}{|}}{N}-$$

(1 9 a)   (1 9 b)

wherein,

R^{10}, R^{11}, R^{12} and R^{13} are divalent organic radicals in the general formula

(20) – (23)

(2 0)   (2 1)   (2 2)

·(2 3)
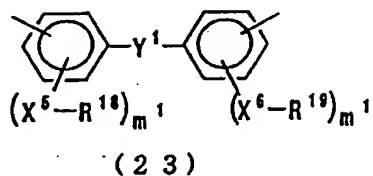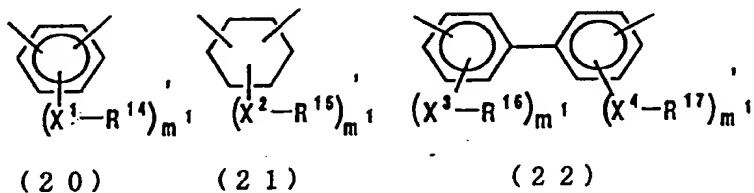
wherein,

X^1, X^2, X^3, X^4, X^5 and X^6 are independently of each other single bond, O, CO_2, OCO,

CH_2O, NHCO or CONH;

R^{14}, R^{15}, R^{16}, R^{17}, R^{18} and R^{19} are independently of each other hydrogen, halogen, C_1-

C_{24} alkyl, C_1-C_{24} alkyl containing fluorine, aryl, propargyl, phenyl or substituted phenyl;

Y^1 is O, S, CO, CO_2, SO_2, CH_2, NH, NHCO, Y^2-Ar^1-Y^3, Y^4-$(CH_2)n^1$-Y^5 or Y^6-Ar^2-
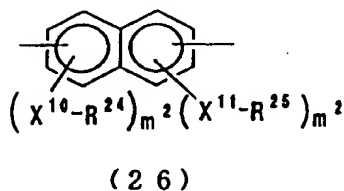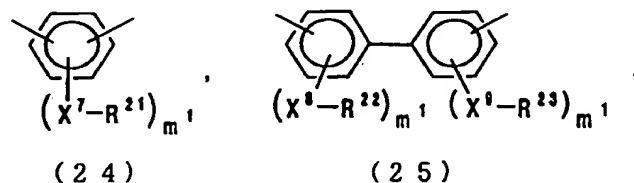
R^{20}-Ar^3-Y^7;

Y^2, Y^3, Y^4, Y^5, Y^6 and Y^7 are independently of each other O, S, CO, CO_2, SO_2, CH_2,

NH or NHCO;

-4-

n^1 is an integer of 1-10;

R^{20} is C_1-C_5 straight or branched lower alkylene, fluoroalkylene or alkylenedioxy; and

Ar^1, Ar^2 and Ar^3 are independently of each other divalent organic radical in general

formula (24), (25) or (26) below

(24)

(25)

(26)

wherein,

X^7, X^8, X^9, X^{10} and X^{11} are independently of each other single bond, O, CO_2, OCO,

CH_2O, NHCO or CONH;

R^{21}, R^{22}, R^{23}, R^{24} and R^{25} are independently of each other hydrogen, halogen, C_1-C_{24}

alkyl, C_1-C_{24} alkyl containing fluorine, aryl, propargyl, phenyl or substituted phenyl;

m^1 is an integer of 1 - 4, and m^2 is an integer of 1 - 3;

with the proviso that when R^{14}, R^{15}, R^{16}, R^{17}, R^{18}, R^{19}, R^{21}, R^{22}, R^{23}, R^{24} and R^{25} are

either hydrogen or halogen, then X^1, X^2, X^3, X^4, X^5, X^6, X^7, X^8, X^9, X^{10} and X^{11} are single
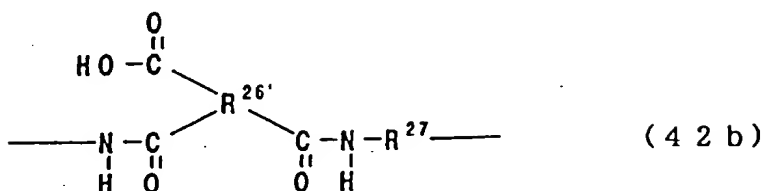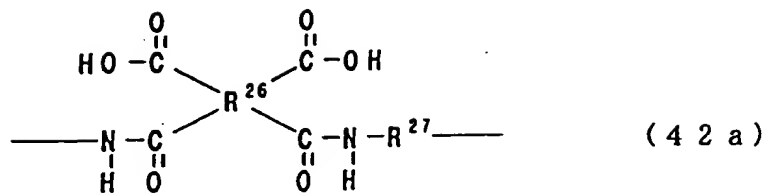
bond; and

R^{a1}, R^{a2}, R^{a3} and R^{a4} are independently of each other hydrogen, alkyl, substituted

alkyl, aryl or propargyl.

5.   (Previously Presented) A liquid crystal alignment agent according to Claim 4,

wherein R^{10} or R^{11} in the general formula (18) or R^{12} and R^{13} in the general formula (19a) and

(19b) are independently of each other a radical selected from the formula (27) – (41) below

(27) , (28) , (29) , (30) ,

(31) , (32) , (33) ,

(34) , (35) ,

(36) , (37) ,

(38) , (39) ,

(40) ,

(41)
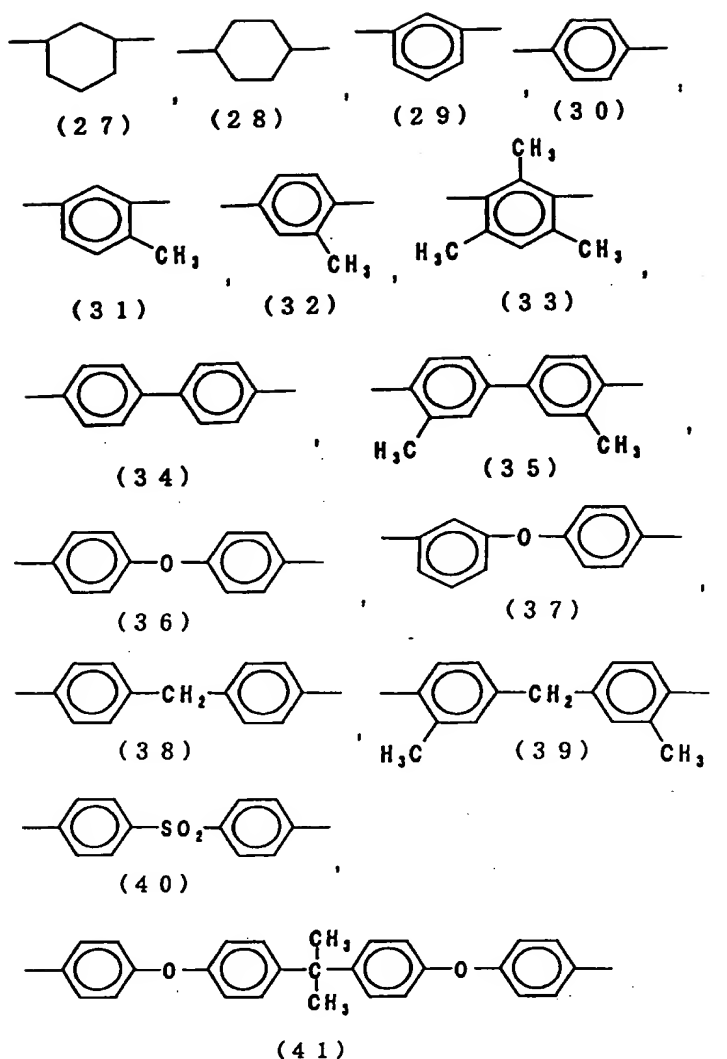
6. (Previously Presented) A liquid crystal alignment agent according to Claim 1, wherein said polymer compound is a polyimide precursor or a polyimide obtained by chemical or heat imidization of said polyimide precursor.

7. (Previously Presented) A liquid crystal alignment agent according to Claim 6, wherein said polymer compound is a polyimide precursor or polyimide obtained by chemical or heat imidization of said polyimide precursor, with the repeating unit comprising of the general formula (42a) and (42b) below

(4 2 a)

(4 2 b)

wherein,

R^{26} is a tetravalent organic radical;

$R^{26'}$ is a trivalent organic radical; and

R^{27} is a divalent organic radical containing an amide radical bonded with a divalent or trivalent aromatic or alicyclic hydrocarbon group.

8.   (Previously Presented) A liquid crystal alignment agent according to Claim 7, wherein R^{27} in the general formula (42a) and (42b) above is selected from the general formula (43) – (48) below

(4 3)

(4 4)

(4 5)
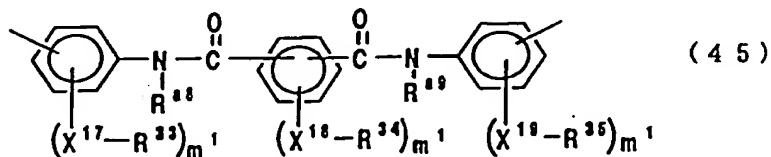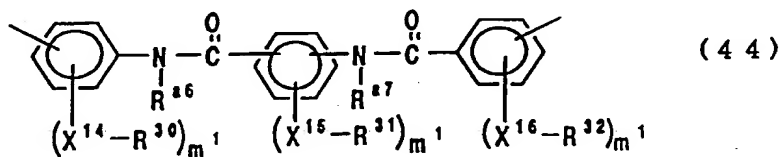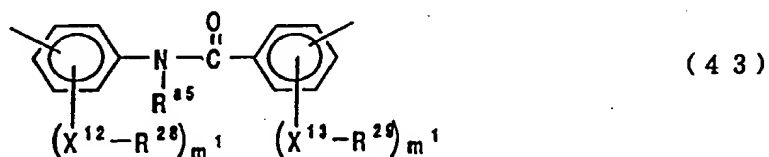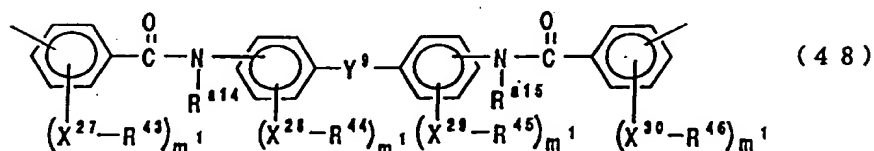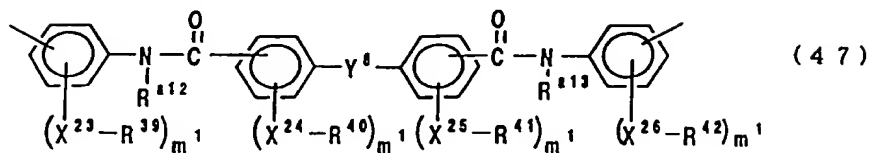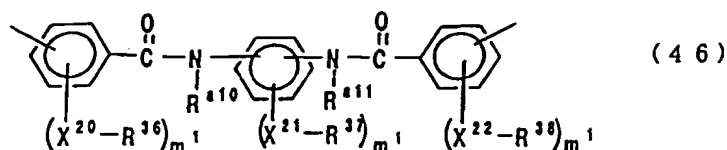
wherein,

X^{12} - X^{30} are independently of each other single bond, O, CO_2, OCO or CH_2O;

R^{28} - R^{46} are independently of each other hydrogen, halogen, C_1-C_{24} alkyl, C_1-C_{24} alkyl containing fluorine, aryl, propargyl, phenyl or substituted phenyl;

R^{a5} - R^{a15} are independently of each other hydrogen, alkyl, substituted alkyl, aryl or propargyl;

Y^8 and Y^9 are O, S, SO_2, CH_2, NH, NHCO or CONH; and

m^1 is an integer of 1 - 4;

with the proviso that when R^{28} - R^{46} are hydrogen or halogen, then X^{12} - X^{30} are single bond.

9.   (Previously Presented) A liquid crystal alignment agent according to Claim 7, wherein the radical for R^{27} in the general formula (42a) and (42b) above is selected from the formula (49) - (56) below

(4 9)

(5 0)

(5 1)

(5 2)

(5 3)

(5 4)

(5 5)

(5 6)
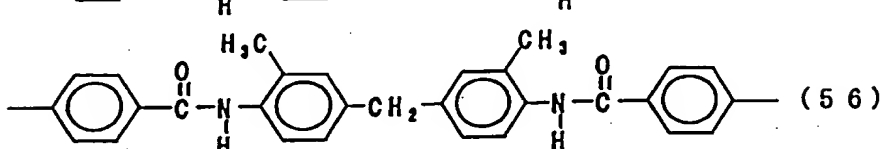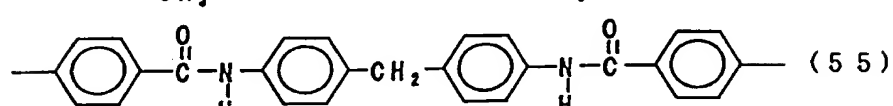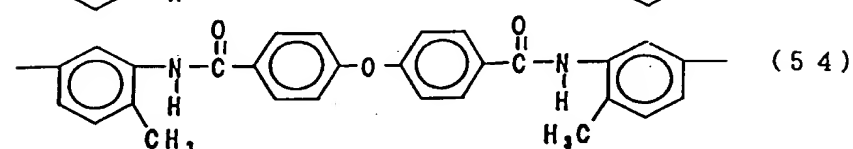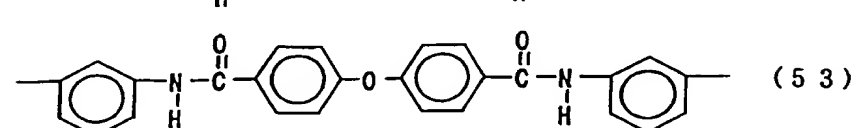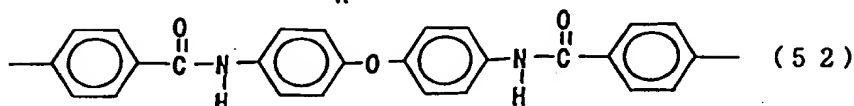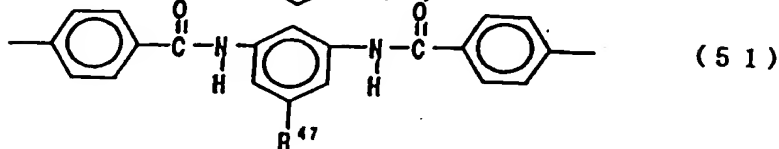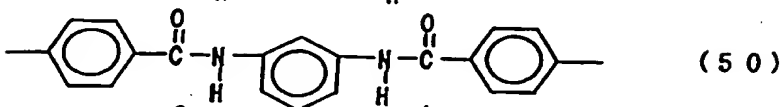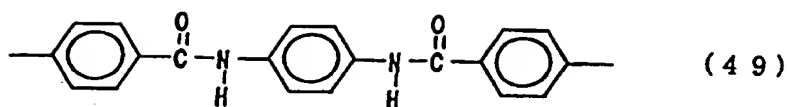
wherein, R^{47} is halogen, C_1-C_{24} alkyl, C_1-C_{24} alkoxy or C_1-C_{24} alkoxycarbonyl.

10.   (Previously Presented) A liquid crystal alignment agent according to Claim 1, wherein said polymer compound is polyurethane.

11.   (Previously Presented) A liquid crystal alignment agent according to Claim 10, wherein said polymer compound is polyurethane having a repeating unit comprising of the general formula (57) below

(5 7)

wherein, R^{48} and R^{49} are independently of each other selected from the radicals shown in the formula (58) - (69) below

(5 8)   (5 9)   (6 0)   (6 1)
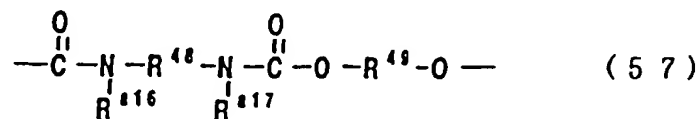
(6 2)   (6 3)

(6 4)   (6 5)

(6 6)   (6 7)

(6 8)   (6 9)

wherein, R^{a16} and R^{a17} are independently of each other hydrogen, alkyl, substituted alkyl, aryl or propargyl.
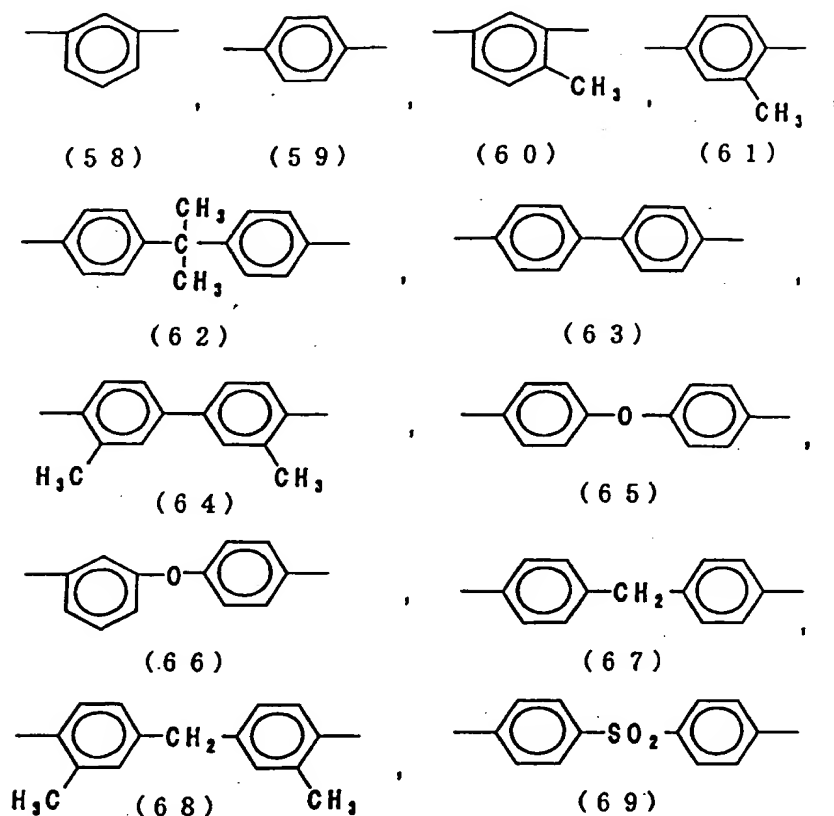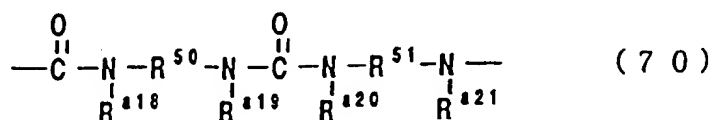
12.   (Previously Presented) A liquid crystal alignment agent according to Claim 1, wherein said polymer compound is polyurea.

13.   (Previously Presented) A liquid crystal alignment agent according to Claim 12, wherein said polymer compound is polyurea having a repeating unit of the general formula (70) below

$$-\overset{O}{\overset{||}{C}}-\underset{R^{a18}}{\overset{|}{N}}-R^{50}-\underset{R^{a19}}{\overset{|}{N}}-\overset{O}{\overset{||}{C}}-\underset{R^{a20}}{\overset{|}{N}}-R^{51}-\underset{R^{a21}}{\overset{|}{N}}- \qquad (7\ 0)$$

wherein,

R^{50} and R^{51} are independently of each other selected from formula (58) - (69) above;

and

R^{a18} - R^{a21} are independently of each other hydrogen alkyl, substituted alkyl, aryl or propargyl.

14.   (Previously Presented) A liquid crystal device using the liquid crystal alignment agent according to Claim 1.

15.   (Previously Presented) A liquid crystal alignment method characterized by the use of the liquid crystal alignment agent according to Claim 1, wherein light or electron rays are irradiated over a thin polymer film formed on a surface of a substrate, achieving liquid crystal alignment without rubbing action.